## Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.07	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start		Rating **	Α	Issue No.		5	
LM End		Issue Type +	Ма	Location * N/A			
Category	Earthen L	GPS La	atitud	le/Longitude			
Calegory				Start		End	
Item	Flood Preparedness & Training				0		0
пеш					0		0
DWR ID	DWR_RD2	DWR_RD2031_01_s _ 2013_5					
		Action/	Comme	nts			
Inspector (	Comments	: LMA has a f	lood resp	onse plan.			

No Photos

Rating \*\* Issue No. LM Start Α 6 Location \* N/A Issue Type + Ma LM End Earthen Levee GPS Latitude/Longitude Category Start End **Emergency Supplies &** Item Equipment DWR ID DWR RD2031 01 s 2013 6 Action/Comments Inspector Comments: Supplies available on-site.

No Photos

Rating \*\* Issue No. LM Start Α 12 LM End Issue Type + Ma Location \* N/A Earthen Levee GPS Latitude/Longitude Category Start End Operations & Maintenance Item Manuals DWR ID DWR\_RD2031\_01\_s \_ 2013\_12 Action/Comments Inspector Comments: O&M Manual available at the office.

No Photos

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side

ble A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

CR : Crown

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### Reclamation District No. 2031 Elliot

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.07	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	0.47	Rating **	М	Issue No.	1	
LM End	0.50	Issue Type +	Ma	Location *	* WS	
Catagony	Supplemental			GPS Latitude/Longitude		
Calegory	Category					End
Item	DWR Ero	sion Survey		37.70474	40 °	37.704740 °
пеш				-121.15914	40 °	-121.159140 °
DWR ID						·

#### Action/Comments

Inspector Comments: 07/31/2014: No significant change observed.

09/10/2013: No significant change observed. 07/18/2012: No significant change observed.

08/18/2011: No significant change observed on site. Debris that blocks the irrigation outlet is visible.

10/19/2010: No significant change observed on site. Sloughing of the bank is occurring adjacent to an irrigation outlet structure. There is moderate to heavy vegetation along the bank that is well established. Broken chunks and slabs of concrete are used as rip rap and line the outside of the irrigation outlet structure. However, much of the rip rap along the slope is sloughing and could possibly lead to future slope instability.

08/05/2010: Recommended as a local maintenance issue, per CLRO. 08/20/2009: No major change observed since last visit; 1 inch fissure cracks developing on the slope; rip rap is showing signs of sloughing; recommend as local maintenance issue; site was previously rated "U". 2008: No change from previous year; irrigation outlet located on site; rip rap placed on river bank.

09/06/2007: Near agricultural diversion; only 3' landside height differential. [2014 Site ID:RD2031U01RM0.48]

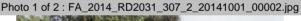


Looking down at the site. The irrigation outlet is operating. Debris is visible at the outlet.

LM Start	0.52	Rating **	М	Issue No. 2		
LM End	0.52	Issue Type +	Ма	Location *		WS
Category	Earthen Levee			GPS Latitude/Longitude		
Category				Start		End
Item	Vegetatio	/egetation			50°	37.704050 °
пеш				-121.1595	78 °	-121.159578 °
DWR ID	DWR_RD2	031_01_s _ 201	2_2			

### Action/Comments

Remove the wild growth other than native grasses from the levee slopes.





View of vegetation on waterside slope. Facing upstream.

\*Location
LS: Land Side N/A: Not Applicable
WS: Water Side
CR: Crown

\*\* Rating
A: Acceptable N: Not Inspected/Rated
M: Minimally Acceptable
C: Corrected
M: Minimally Acceptable
U: Unacceptable
A/W: Acceptable but Monitor & Maintain

\*\* Rating
A: Issue Type
Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.07	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	0.52	Rating **	М	Issue No. 2 (cor		2 (cont)	
LM End	0.52	Issue Type +	Ma	Location *	on * WS		
Category Earthen Levee				GPS Latitude/Longitude			
Calegory	Category			Start		End	
Item	Vegetatio	Vegetation			50°	37.704050	0
item					78 °	-121.159578	0
DWR ID	DWR_RD2031_01_s _ 2012_2						
	Action/Comments						

Remove the wild growth other than native grasses from the levee slopes.



10/26/2011 Updated photo of waterside vegetation.

LM Start	0.78	Rating **	М	Issue No.	36			
LM End	0.78	Issue Type +	Ma	Location *	LS			
Catagory	Category Earthen Levee				GPS Latitude/Longitude			
Calegory						End		
Item	Animal Co	nimal Control			77 °	37.701177 °		
item				-121.1620	55 °	-121.162055 °		
DWR ID	DWR_RD2031_01_f _ 2012_36					·		
	Action/Comments							

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.



View of rodent burrows on landside slope.

LM Start	0.81	Rating **	М	Issue No.		20
LM End	0.81	Issue Type +	Ма	Location *		LS
Category Earthen Levee		Earthen Levee				le/Longitude
Calegory				Start		End
Item	Encroach	Encroachments			99 °	37.700799 °
item				-121.1624	18 °	-121.162418 °
DWR ID	DWR_RD2031_01_s _ 2013_20					
		۸ - ۱: ۱	C	-1-		

Pipe

Inspector Comments: PVC pipe present and obstructing drain pipe.



10/26/2011 Updated photo of PVC pipe pieces obstructing drain pipe, issue remains from Spring 2011 inspection.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway		Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.07	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	0.81	Rating **	М	Issue No.		20 (cont)	
LM End	0.81	Issue Type +	Ma	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End	
Item	Encroach	ments		37.7007	99 °	37.700799	•
item				-121.1624	18 °	-121.162418	0
DWR ID	DWR_RD2031_01_s _ 2013_20						
		Action/	Comme	nts			

Action/Comment

Pipe

Inspector Comments: PVC pipe present and obstructing drain pipe.



05/10/2011 PVC pipe pieces are obstructing opening to drain pipe.

LM Start	1.01	Rating **	М	Issue No.	59			
LM End	1.01	Issue Type +	Ma	Location *	LS			
Category Earthen Levee				GPS Latitude/Longitude				
Calegory				Start		End		
Item	Animal Co	ontrol		37.6993	27 °	37.699327 °		
item				-121.1653	64 °	-121.165364 °		
DWR ID	DWR_RD2031_01_f _ 2014_59							
Action/Comments								

Exterminate rodents and backfill and compact or grout burrows.

No Photos

LM Start	1.15	Rating **	М	Issue No.	128		
LM End	1.15	Issue Type +	Ма	Location *	WS		
Category Earthen Levee			GPS Latitude/Longitude				
Calegory				Start		End	
Item	Animal Co	ontrol		37.69887	73 °	37.698873 °	
item				-121.16778	35 °	-121.167785 °	
DWR ID	DWR_RD2031_01_s _ 2014_128						
Action/Comments							

Exterminate rodents and backfill and compact or grout burrows.

Photo 1 of 1 : FA\_2014\_RD2031\_307\_128\_20141001\_00038.jpg



View of the rodent hole on the waterside levee slope.

\* Location

LS: Land Side N/A: Not Applicable

WS: Water Side
CR: Crown

\*\* Rating
A: Acceptable
M: Minimally Acceptable
U: Unacceptable

N: Not Inspected/Rated C: Corrected A/W: Acceptable but Monitor & Maintain + Issue Type

Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.07	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	1.58	Rating **	М	Issue No.	3		
LM End	1.58	Issue Type +	Ма	Location *		LS	
Category	Earthen Levee			GPS Latitude/Longitude			
Calegory		Start		End			
Item	Erosion /	Bank Caving		37.6987	76 °	37.698776 °	
item				-121.1743	27 °	-121.174327 °	
DWR ID	DWR_RD2031_01_s _ 2012_3						
Action/Comments							

Note and monitor erosion site.

Inspector Comments: Erosion is active around the irrigation standpipe.

LM Start	1.58	Rating **	М	Issue No.	3 (cont)
LM End	1.58	Issue Type +	Ma	Location *	LS



View of the erosion site on landside slope, facing upstream.

Photo 2 of 2: FA\_2014\_RD2031\_307\_3\_20141001\_00005.jpg



10/26/2011 Active erosion into the levee prism around irrigation standpipe.

LM Start	1.60	Rating **	М	Issue No.		8	
LM End	1.60	Issue Type +	Ма	Location *	WS		
Category	Category Earthen Levee			GPS Latitude/Longitude			
Calegory				Start		End	
Item	Erosion /	Bank Caving		37.69861	0 °	37.698610 °	
пеш				-121.17459	8 °	-121.174598 °	
DWR ID	DWR_RD2	_RD2031_01_s _ 2012_8					
Action/Comments							

Note and monitor erosion site.

Inspector Comments: Active erosion is occurring around irrigation inlet.



10/26/2011 Active erosion shown around irrigation inlet.

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated M: Minimally Acceptable C: Corrected Ob: Design & System Obsolescence

U: Unacceptable A/W: Acceptable but Monitor & Maintain Enforcement

\* Issue Type

Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

# **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.07	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	1.63	Rating **	U	Issue No.	52			
LM End	1.63	Issue Type +	Ма	Location *	WS			
Category	Earthen L	arthen Levee			GPS Latitude/Longitude			
Calegory			Start		End			
Item	Animal Co	ontrol		37.69833	1 °	37.698334		
пеш						-121.175176	0	
DWR ID	DWR_RD2	031_01_f _ 201	3_52					

#### Action/Comments

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.





View of the multiple large rodent hole in the waterside levee slope.

LM Start	1.65	Rating **	М	Issue No.	9			
LM End	1.65	Issue Type +	Ма	Location *	LS			
Category Earthen Levee				GPS Latitude/Longitude				
Calegory		Start		End				
Item	Erosion /	Bank Caving		37.6982	08 °	37.698208 °		
item				-121.1754	00 °	-121.175400 °		
DWR ID DWR_RD2031_01_s _ 2012_9								
Action/Comments								

Note and monitor erosion site.

Inspector Comments: Active erosion around irrigation inlet in levee prism.



10/26/2011 Active erosion into levee prism around irrigation inlet.

LM Start	2.02	Rating **	М	Issue No.		38	
LM End	2.09	Issue Type +	Ma	Location *		CR	
Category	Earthen L	.evee	GPS Latitude/Longitude				
Calegory	Category				Start		
Item		rface / Depres	ssions /	37.69372	20 °	37.692782	٥
пеш	Rutting	ng		-121.17752	27 °	-121.177642	0
DWR ID	DWR_RD2	031_01_s _ 201	12_38				
		Action/	Comme	nts			

Repair depressions or ruts in the crown or slope.

No Photos

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiancy
WS : Water Side	M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence
CR : Crown	U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.07	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	2.44	Rating **	С	Issue No.	43		
LM End	2.44	Issue Type +	Ма	Location *	LS		
Category	GPS Latitude/Longitude						
Calegory	gory			Start		End	
Item	Animal Co	ontrol		37.6883	88 °	37.688388	0
пеш				-121.1801	35 °	-121.180135	0
DWR ID DWR_RD2031_01_f _ 2012_43							
	Action/Comments						

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comments: Large rodent holes were noted on the landside slope.

No Photos

Rating \*\* Issue No. LM Start 3.55 A/W 24 WS Issue Type + Ma Location \* LM End 3.55 Earthen Levee GPS Latitude/Longitude Category Start End Encroachments 37.690864° 37.690864° Item -121.195990° -121.195990 DWR RD2031 01 s 2012 24 DWR ID

Action/Comments

Pipe

Inspector Comments: Drain to channel

No Photos

Rating \*\* Issue No. LM Start 6.21 M 19 6.46 Issue Type + Ma Location \* LS LM End Earthen Levee GPS Latitude/Longitude Category Start End 37.668302 Vegetation 37.668988° Item -121.223514 -121.227842 DWR ID DWR\_RD2031\_01\_s \_ 2014\_19 Action/Comments

Remove the wild growth other than native grasses from the levee slopes.

No Photos

\* Location LS: Land Side

N/A: Not Applicable WS : Water Side

Friday, December 19, 2014 07:24

: Acceptable : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated

C : Corrected

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

A/W: Acceptable but Monitor & Maintain En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	5.98	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	1.42	Rating **	М	Issue No.	15		
LM End	1.42	Issue Type +	Ma	Location *	LS		
Category	evee	GPS Latitude/Longitude					
Calegory	alegory					End	
Item	Trim / Thi	n Trees		37.6480	80 °	37.648080	۰
пеш				-121.2210	31 °	-121.221031	0
DWR ID	DWR ID DWR_RD2031_02_s _ 2013_15						
	Action/Comments						

Trim trees to at least five feet above ground level.



View of the tree limb obstructing visibility and access to the landside levee slope.

LM Start	2.02	Rating **	М	Issue No.	ssue No. 25		
LM End	2.02	Issue Type +	Ma	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Trim / Thi	n Trees		37.6408	74 °	37.640874°	
пеш			-121.2238	70°	-121.223870 °		
DWR ID DWR_RD2031_02_f _ 2014_25							
	Action/Comments						

Trim trees to at least five feet above ground level.



View of the overgrown tree obstructing visibility and access of the landside levee slope.

LM Start	2.15	Rating **	М	Issue No.	21			
LM End	2.15	Issue Type +	Ma	Location *	CR			
Category Earthen Levee				GPS Latitude/Longitude				
Calegory			Start		End			
Item	Vegetatio	n		37.64063	2 °	37.640632	0	
item				-121.22153	9°	-121.221539	0	
DWR ID DWR_RD2031_02_f _ 2014_21								
	Action/Comments							

Remove the wild growth other than native grasses from the levee slopes.



View of overgrown vegetation on the levee crown.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	5.98	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	3.00	Rating **	М	Issue No.	966			
LM End	3.60	Issue Type +	Ма	Location *		LS		
Category Earthen Levee				GPS Latitude/Longitude				
Calegory	Category				Start End			
Item	Trim / Thi	n Trees		37.637626	°	37.638301	0	
пеш				-121.207191 ° -121.19646			0	
DWR ID DWR_RD2031_02_s _ 2012_966								
	Action/Comments							

No Photos

Trim trees to at least five feet above ground level. Inspector Comments: Obstructive trees and vegetation along highway are on the landside slope of the levee.

LM Start	4.24	Rating **	С	Issue No.	9		_
LM End	4.29	Issue Type +	Ма	Location *	LS		
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Animal Co	ontrol		37.63276	61 °	37.632157	0
item				-121.19068	34 °	-121.190242	0
DWR ID DWR_RD2031_02_s _ 2012_9							
Action/Comments							

No Photos

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comments: Heavily rodent infested area. Some burrows appear to penetrate the levee from the waterside to the landside.

LM Start	4.25	Rating **	С	Issue No.	ssue No. 23		
LM End	4.25	Issue Type +	Ма	Location *	WS		
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start End			
ltom	Encroach	ments		37.63252	20 °	37.632520	0
пеш	ltem				)5 °	-121.190605	0
DWR ID DWR_RD2031_02_s _ 2013_23							
	Action/Comments						

No Photos

Prunings

Inspector Comments: Prunings and other debris in the floodway.

N : Not Inspected/Rated C : Corrected

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

### **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	5.98	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	4.33	Rating **	A/W	Issue No.	1	
LM End	4.37	Issue Type +	Ma	Location *	WS	
Category			GPS Latitude/Longitude			
Calegory	egory			Start		End
Item	DWR Ero	sion Survey		37.6317	16 °	37.631716 °
пеш				-121.18937	70 °	-121.189370 °
DWR ID						

#### Action/Comments

Inspector Comments: 7/17/2014: The erosion has slightly expanded toward levee toe at two pocket locations.

09/10/2013: The site has been visited. The erosion has expanded toward levee crest at two pocket locations.

07/18/2012: No significant change observed on the site.

08/18/2011: No significant change observed on the site. Dead trees and animal activities are visible. The closest point of the erosion site to the levee toe is about 100 ft.

10/19/2010: There is active scouring occurring on the bank due to the nature of the flow and the lack of armor protection. There is also a fallen log immediately downstream of where the erosion has occurred and is protruding outward, possibly creating an eddy and scouring the bank. With the remaining 100-foot wide berm, the levee prism is not yet affected. However, the bank will continue to degrade, and eventually intrude into the levee prism if no protection is put in place. Erosion site is recommended for annual assessment and monitoring during flood events. [2014 Site ID:RD2031U02RM78.7]



Looking downstream. The erosion has progressed toward levee.

LM Start	4.58	Rating **	A/W	Issue No.	22		
LM End	4.58	Issue Type +	Ма	Location *	WS		
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Encroachments			37.6308	55 °	37.630855 °	
				-121.1854	42 °	-121.185442 °	
DWR ID	ID DWR_RD2031_02_f _ 2012_22						
A ation / Common anto							

### Action/Comments

#### Pipe

Inspector Comments: 36" discharge pipe through the levee with flap gate closed.

### Photo 1 of 1: FA\_2014\_RD2031\_308\_22\_20141001\_00012.jpg



View of the closed flap gate on waterside.

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2014

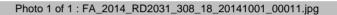
# **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	5.98	11/04/2014 11/04/2014	Maksim Khashchuk

LM Start	5.08	Rating **	С	Issue No.	12		
LM End	5.08	Issue Type +	Ma	Location *	WS		
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Slope Stability			37.6308	43 °	37.630843	0
				-121.176329 °		-121.176329	0
DWR ID	DWR_RD2031_02_s _ 2014_12						
Action/Comments							
Repair slope instability.							

No Photos

LM Start	5.52	Rating **	Α	Issue No.	18		_
LM End	5.52	Issue Type +	Ma	Location *	LS		
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Seepage / Sandboils			37.63080	)2 °	37.630802	0
				-121.16843	39 °	-121.168439	0
DWR ID DWR_RD2031_02_s _ 2014_18							
		Action/	Comme	nts			





View of the seepage at the landside levee toe.